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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.								
09/712,017	11/14/2000	William A. Perry JR.	020533.0197	8679								
7590 Baker Botts L.L.P. 2001 Ross Avenue Dallas, TX 75201-2980		09/11/2007	<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">AVELLINO, JOSEPH E</td></tr><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>2143</td><td></td></tr></table>		EXAMINER		AVELLINO, JOSEPH E		ART UNIT	PAPER NUMBER	2143	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/712,017

Applicant(s)

PERRY ET AL.

Examiner

Joseph E. Avellino

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-14, 16-18, 21-26, 31-33, 35-41, 61, 68, 69, 71-79 and 83-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-14, 16-18, 21-26, 31-33, 35-41, 61, 68, 69, 71-79 and 83-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 5-11, 16-18, 21-26, 31-33, 35-41, 61, 68, 69, and 71-89 are pending in this examination.

Claim Rejections - 35 USC § 112

2. The Office has withdrawn the previous rejections under this statute.

Allowable Subject Matter

3. The Examiner believes that if the limitations of claims 11 and 17 were incorporated into independent claim 5 would make the claim allowable. Likewise if similar limitations of claims 5, 11, and 17 were incorporated into the independent claims, it would put the case in condition for allowance.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 5-11, 16-18, 21-25, 26, 31-33, 35-41, 61, 68, 69, 71-79, and 86-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Romohr (USPN 5,596,723) in view of Vellanki et al. (USPN 5,999,979) (hereinafter Vellanki) in view of Ohanian et al. (USPN 6,122,287) (hereinafter Ohanian).

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5. Referring to claim 5, Romohr discloses a method of providing automated assistance in configuring customer premises equipment for communication with another network element, comprising:

automatically identifying at least one of a valid virtual channel and a protocol valid for configuration with the customer premises equipment without prompting a user for information that directly or indirectly identifies the at least one of the valid virtual channel and the valid protocol, the valid virtual channel being a communications link (i.e. transmitting broadcast inquiries using various frame protocols across the network) (e.g. abstract);

assisting a user in configuring the customer premises equipment for use with the identified virtual channel and/or protocol (i.e. configures itself according to the most prevalent network operating system and frame type being used in the network) (e.g. abstract; Figure 4E);

communicating over a virtual channel and toward a destination network element (it is inherent that any communication from one entity must be sent to a destination entity, even if the sender is the destination entity) a probing configuration signal, the valid virtual channel being a communications link (e.g. abstract);

receiving over the virtual channel a response to the configuration signal (i.e. counts the network operating system specific responses for each of these supported frame types) (e.g. abstract; Figure 3C, ref. 340); and

identifying as valid for configuration the at least one of the valid virtual channel and the valid protocol associated with the response (i.e. configuring the equipment based on the most prevalent network OS and frame type) (e.g. abstract);

wherein communicating the first probing configuration signal comprises communicating a first probing configuration signal, receiving a response to the signal, and identifying the first valid protocol from the first signal (Figure 3C, ref. 332-340); and repeating the process for a second signal (i.e. send a second signal for various protocols and frame types).

Romohor does not specifically disclose that the CPE equipment is configured with both the first and second protocols at the same time, rather that over multiple recitations, it would be appropriate that a client computer can be configured with multiple valid protocols. In analogous art, Vellanki discloses another method for automatically detecting a most advantageous protocol by configuring the client computer with the best received protocol (e.g. abstract; Figure 7). The protocols used in Vellanki differ in the sense that Romohor utilizes data link protocols (i.e. Ethernet, VINES, etc.) and Vellanki deals with network layer protocols and above (i.e. HTTP, FTP, etc.) (e.g. abstract; Figure 7). Vellanki further discloses that the identification is done without user intervention or prompting of a GUI (i.e. the data system requests are controlled by a control thread, and the phrase “automatically” and the use of an “auto-detect mechanism” would indicate to one of ordinary skill in the art that no user intervention is required) (e.g. abstract; col. 5, lines 55-67). It would have been obvious to one of ordinary skill in the art to combine the teaching of Vellanki with Romohor in

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order to provide an efficient for a client to configure itself with the particular protocols of the network, by utilizing the lower level protocols of Romohor and the higher level protocols of Vellanki to be simultaneously configured with both protocols utilized by the references. This would provide an efficient method to completely configure a client's computer automatically select the most advantageous protocol to communicate with a server as supported by Vellanki (col. 3, liens 55-60).

Romohor-Vellanki do not specifically disclose the use of conveying protocol signals over channels and configuring the system with the first channel, the second channel, the first protocol, and a second protocol. In analogous art, Ohanian discloses another protocol configuration system which discloses sending protocol packets over a particular channel and then configuring the system based on the response (Figure 4, refs. 220,225; col. 10, lines 1-20) (although the system only describes the process with respect to one channel, Ohanian discloses that typical service include a plurality of Channels (col. 2, lines 3-10), thereby conveying to one of ordinary skill in the art that the protocol determination can be utilized over the plurality of channels. It would have been obvious to one of ordinary skill in the art to combine the teaching of Ohanian with Romohor-Vellanki in order to efficiently detect the data link layer protocol used by a remote device over a particular channel as supported by Ohanian (col. 3, lines 53-55).

6. Referring to claim 6, Romohr discloses the invention substantively as described in claim 5. Romohr does not specifically disclose the probing configuration signal comprises an F5 Operations, Administration, and Maintenance (OAM) loopback signal.

However, it is well known and that the ATM networking standard includes various types of OAM cells that carry OAM related information that are used in administrative and supervisory actions and would provide a beneficial protocol to test for in the system of Romohr. Therefore it would have been obvious to include OAM signals to the system of Romohr to further provide more efficient transfer of network monitoring information and supervisory messages to network elements, resulting in enhanced failure detection.

7. Referring to claim 7, Romohr discloses a signal having a self configuring protocol (i.e. ARP) (Figure 3E, ref. 352-354).

8. Referring to claim 8, Romohr discloses the invention substantively as described in claim 7, however does not specifically disclose the probing configuration signal includes a DHCP request, however it is well known in the art that computers utilize DHCP requests in a network to determine network connectivity and to determine which addressing modes are used in the network. By this rationale it would have been obvious to one of ordinary skill in the art to include DHCP in the protocol requests transmitted by Romohr in order to further simplify the system disclosed as well as to provide more efficient network component detection.

9. Referring to claim 9, Romohr discloses the invention substantively as described in claim 8. Romohr does not specifically disclose the protocol comprises an Internet over ATM protocol, however it is well known that the Internet over ATM protocol is

widely used in networks for its reliability and ability to allow multiple networks to communicate with one another. Therefore would have been obvious to one of ordinary skill in the art to incorporate the Internet over ATM protocol to the system of Romohr to allow the internetworking of multiple LAN systems further enhancing data exchanging and message transfer.

10. Referring to claim 10, Romohr discloses the invention substantively as described in claim 8. Romohr does not specifically disclose the protocol comprises a Point to Point over ATM protocol or Point to Point over Ethernet protocol, however it is well known that both of these protocols are widely used in networks for its reliability and secure communications between computing systems. Therefore would have been obvious to one of ordinary skill in the art to incorporate these protocols to the system of Romohr to allow further robustness of the system and provide further enhanced customer service to those users who use those protocols.

11. Referring to claim 11, Romohr discloses communicating the probing configuration signal over a plurality of virtual channels likely to return a response (i.e. frame types used in the networks) (Figure 5-5A).

12. Referring to claims 16, and 18, Romohr discloses communicating the probing configuration signals approximately simultaneously (i.e. one right after another) (Figure 3E).

13. Referring to claims 17, 40, and 71, Romohr discloses the invention substantively as described in claim 16. Romohr further discloses communication a probing configuration signal over a plurality of virtual channels (see rejection for claims 11 and 12). Romohr does not disclose spawning a plurality of threads, and monitoring the probing configuration signal associated with each virtual channel using a separate thread. In analogous art, Vellanki discloses automatically configuring the computer device by spawning a plurality of threads, and monitoring the probing signal associated with each virtual channel (i.e. "connection") (col. 6, lines 1-13). It would have been obvious to one of ordinary skill in the art to combine the teaching of Vellanki with Romohr in order to distribute the probing across various threads, thereby increasing the throughput of the system.

14. Referring to claims 21 and 25, Li discloses communicating a diagnostic signal (i.e. probing signal) toward a destination network (e.g. abstract); and
determining and reporting on the connectivity of a network layer (i.e. physical layer, which is considered a network layer according to the OSI standardized model of network implementation) based on whether a response to the diagnostic signal is received (if the connection is unsuccessful, an error message is displayed) (e.g. abstract).

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15. Referring to claim 22, Romohr discloses the invention substantively as described in claim 21. Romohr does not specifically disclose the diagnostic signal comprises a PING signal operable to test an IP layer of the network, however it is well known that a PING signal is used widely to test and determine if a network element is connected (it is well known that hackers routinely ping random IP addresses to determine which IP addresses are in use by which addresses are able to return signals to the source computer). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate a PING signal operable to test an IP layer of the network to determine if a network server is available to communicate with the interconnecting device of Romohr in order to determine which server to use in order to appropriately configure the customer premises equipment thereby providing more reliable connections and further enhancing customer service.

16. Referring to claim 23, Romohr discloses the invention substantively as described in claim 21. Romohr does not specifically disclose the diagnostic signal comprises a DNS signal operable to test a transmission layer of the network, however it is well known that a DNS signal is used widely to test and determine if the network element is connected and able to determine their appropriate location and to what network service they are connected (when a network client is connected to a network the first time, it is routine that the computer locate the DNS server in order to configure itself with the network for settings such as name server IP address resolution, etc.). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate a DNS signal

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operable to test a transmission layer of the network to determine if a network server is available to communicate with the interconnecting device of Romohr in order to determine which server to use in order to appropriately configure the customer premises equipment thereby providing more reliable connections and further enhancing customer service.

17. Referring to claim 24, Romohr discloses the invention substantively as described in claim 21. Romohr does not specifically disclose the diagnostic signal comprises a HTTP request signal operable to test a application layer of the network, however it is well known that an HTTP signal is widely used to test and determine if the network element is connected and able to determine their connection capabilities under stress (numerous web server load testing systems will issue numerous HTTP GET requests in order to determine the capabilities of a particular server; furthermore it is widely known that Denial of Service attacks on servers by hackers use a flooding technique of HTTP requests in hopes to overload the server in order to produce a crash of the system).

Therefore, it would have been obvious to one of ordinary skill in the art to incorporate an HTTP signal operable to test a application layer of the network to determine if a network server is available to communicate with the interconnecting device of Romohr in order to determine which server to use in order to appropriately configure the customer premises equipment thereby providing more reliable connections and further enhancing customer service.

18. Referring to claim 26, an inherent feature of any computer on a network is that it contains a modem.

19. Claims 31, 33, 35-39, 41, 61, 68, 72-74, and 85 are rejected for similar reasons as stated in the claims above. Furthermore Vellanki discloses identifying a valid virtual channel since it is well known that the connection between ports on a client to a server can be construed as a "logical signal connection". Vellanki discloses the use of FTP and HTTP, which have specific ports associated with each of those protocols, namely 21, and 80. As such, the connection between the client's port 21 and the server's port 21 construes as a logical signal connection. This connection inherently must be configured to be used, and therefore meets the limitations of exemplary claim 31.

20. Referring to claim 75, Romohr discloses displaying the valid virtual channel and protocol to a user, receiving the user's selection and configuring the customer premises equipment for operating using the selected channel and protocol (the computer automatically configures based on the prevalent network type, however the user can manually override this based on desired selection, therefore is able to receive a user selection) (e.g. abstract; Figures 4J-M).

21. Referring to claims 83, and 84, Vellanki discloses that a look-up table is not utilized in order to identify the protocols (i.e. a priority is used) (e.g. abstract).

22. Referring to claims 86-89, Vellanki discloses no user intervention to autodiscover protocols, and therefore inherently disclose no response to prompts in a GUI (e.g. abstract; col. 5, lines 55-67).

Response to Arguments

23. Applicant's arguments filed June 15, 2007 have been fully considered and are persuasive, the previous rejections have been withdrawn, however new rejections have been provided.

Conclusion

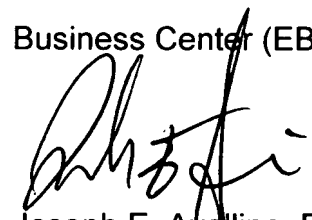
24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Joe Avellino', is written over the printed name.

Joseph E. Avellino, Examiner
August 24, 2007